

Rowley (Wm) H.D.

A N

E S S A Y

ON THE

O P H T H A L M I A

O R

INFLAMMATION OF THE EYES,

AND THE

D I S E A S E S

OF THE

T R A N S P A R E N T C O R N E A ;

W I T H

I M P R O V E M E N T S

I N T H E

M E T H O D S O F C U R E.

By WILLIAM ROWLEY, SURGEON.

L O N D O N :

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IN THE

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BY WILLIAM HOWELL, M.D.

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P R E F A C E.

TO assist in preserving the precious organ of vision, and relieve the injuries which that tender and sensible part is subject to, is of the utmost importance.

The following Essay is intended as an improvement on the treatment of inflamed Eyes, and the diseases of the Transparent Cornea. In my Essay on the cure of Ulcerated Legs, I have freely censured the common treatment, and therein proposed a new method of my own. The constant success of which, still farther confirms what I have advanced on that subject. In this present work I have delivered my sentiments with equal freedom on Blisters, Issues, Setons,

Setons, &c. all which I have rejected in my own practice, being always painful, and for the most part useless ; and I am thoroughly satisfied, from a long series of experience and success, of the utility of the methods which I have recommended.

High Holborn,

N^o. 192.

ON THE
OPHTHALMIA,
OR
INFLAMMATION OF THE EYES.

THE Inflammation of the Eyes is a disease which the generality of authors have treated on, but I believe very few improvements have been made in the methods of cure, from the most antient writers down to the present time. Remedies have been applied with little or no variation, and whoever will compare the antients with the moderns, will find their practice and success to be nearly the same. I shall therefore first take a view of the disease and its remedies, and afterward explain, on the most simple principles, my new method of treatment.

The Ophthalmia is an inflammation of the Tunica Conjunctiva, or other Membranes of the Eye, attended with great pain, heat, and a saline, acrimonious discharge, which occasions an intolerable smarting, and sometimes excoriates the cheek, the Conjunctive Membrane is sometimes considerably thickened, and that part which lines the lids turns outward. When the Inflammation is thus violent, the Cornea sometimes seems considerably sunk, and the whole Conjunctive Membrane appears red; if these are attended with the appearance of atoms flying before the eye, then it is imagined that the Inflammation affects the Tunica Retina.

Some authors have ranged this disease under a number of distinct species, and have proposed remedies for every case, as

The dry and humid Ophthalmia.

The Ophthalmia from a defluxion of the brain.

The Ophthalmia with a dry film.

The Ophthalmia which seizes the globe at the lower angle.

The

The Ophthalmia with pimples on the globe of the eye.

The Ophthalmia with abscesses of the Cornea and Conjunctiva.

The Erysipelatous Ophthalmia.

The Chemosis.

The Inflammation of the Choroides.

The Ophthalmia from dirt.

The Ophthalmia from strokes.

The Ophthalmia from the rupture of the vessels spread on the Conjunctiva. .

As these distinctions are very complex and of little service in the cure, I shall reduce them to two.

Every Inflammation of the eye, let whatever part be affected, or from whatever cause arising, when not complicated with any disease in the constitution, I shall consider as a simple Inflammation, for the remedies in this case require little or no variation.

When the disease arises from the Struma, or Lues Venerea, I shall consider it in another view, as the cure cannot then be

effected without attending to the particular cause in the constitution, and I believe these two are sufficient for the treatment of these cases, as other distinctions only serve to perplex, and render confused a true idea of the disease and cure.

The first and most common remedy is bleeding.

Repeated purges are likewise administered.

Lotions of brandy and water, astringents of the vitriolic kind dissolved in water, to which some add heavy drying powders, as the Lap. Calamin. Lap. Tut. and Cerufs prepared. Lime water, Sal Armoniac, and various other remedies which are similar in their effects, are frequently used.

The diet is likewise considered, which is directed to be very low.

If the foregoing methods do not succeed, then blisters are applied behind the ears, between the shoulders, and to the whole hairy scalp, which by some are directed to be perpetual.

Plaisters

Plaisters of Pix Burgundia, and Mastich have been thought useful.

Leeches are ordered to be applied to the temples, &c.

Sternutatories are recommended.

Cupping and scarifications are ordered in the neck, and the Tunica Conjunctiva is frequently scarified.

Issues and Setons are likewise in common directed.

The Ung. Tutiaë, Vitriolum Album powdered and mixed with fresh butter, and Sir Hans Sloane's ointment have been thought to perform wonders in the Inflammation of the eyes.

Poultices of various sorts have been used.

The Pediluvia is recommended.

In the venereal and strumous Ophthalmia, Mercurials, Alteratives, and the Bark are administered.

This is the general method of treatment to be found in authors, on which I shall make the following observations.

Bleeding is certainly a very useful remedy in this, as in all other Inflammations.

Purges are likewise of some use, and may be occasionally repeated, according to the circumstances of the case and constitution of the patient; but I think those of the drastic kind are highly improper.

A lotion of brandy and water cannot be a very proper application to an inflamed Membrane, and especially if violent; if this is allowed, how much more absurd must be the application of astringents? When the eye is violently inflamed, the discharge is considerably increased, is rendered more acrimonious, and excoriates the surrounding parts; and how it is that astringent washes have been imagined so beneficial, may be easily accounted for. It is the known property of astringents, to check or stop a discharge, the checking this discharge in the eyes for a short time, allays the irritation and smarting which its saline particles occasion on the inflamed and excoriated parts, but these ~~three~~ good effects are soon removed by a fresh return of the discharge, which, in proportion to its increase, gradually lessens the astringent effects of the Lotion,
and

and renders it necessary to be repeated. It is, however, for this temporary relief, that to eye waters have been attributed virtues which I believe they never possessed, and it must be owing to this that they have acquired so high a reputation. It is not a common practice in other Inflammations to use spirituous or astringent applications, nor would it be thought prudent to stop a discharge in a violent Inflammation, where a serum is issuing through the skin, as in some cases of the Erysipelas, and how it is reconcileable to these cases, is impossible for me to determine. I am convinced by repeated trials that these applications retard the cure, and not unfrequently do mischief, probably by preventing the blood from being taken up by the reflux vessels; and I have known instances where an incurable eruption on the face has succeeded their use.

The using ponderous or any powders in a lotion, is nearly the same practice as the former, with this difference, that the powder insinuates itself between the lower eye-

lid, and there keeps up an irritation, and, in consequence, renders the inflammation more violent.

If astringent applications are of any use in these cases, I would recommend them when the inflammation is entirely subsided, and there remains a relaxation from the powerful evacuations made use of in the cure.

Solutions of Sal Armoniac, Lime water, Sea salt, &c. is rather a cruel treatment and ought never to be made use of, not even in films of the Cornea, as I shall hereafter explain.

The advising a low diet is absolutely necessary, and a great part of the cure depends upon a strict observation of it. The best remedies will prove ineffectual, unless assisted by the most exact regimen.

Blisters applied behind the ears, shaving the head, and applying one to the whole scalp, to the shoulders, or to both legs, I am of opinion are of no very great service in the cure: though in advancing this, I do not doubt but I shall be censured, as this practice, like other prejudices, is so well supported

ported by custom ; but even supposing blisters to be very useful, if a cure can be effected in a shorter time without their application, I appeal to the sense and humanity of every practitioner if he would use them ?

Leeches applied to the temples I have frequently used with considerable advantage, but particularly to children in those inflamed eyes, which accompany or follow the small pox or measles.

Sternutatories are highly improper, as their force must increase the circulation, and in consequence the Inflammation.

Scarifications and Cupping I have frequently tried, but upon the whole, with no very great advantage.

Scarifying the Conjunctive Membrane, cutting setons or issues, except for the sake of form and keeping up the appearance of complying with the common run of practice, I am of opinion are rough methods, which are not attended with advantages equal to what the patient suffers in undergoing these disagreeable operations.

The

The Ung. Tutiaë, the Vitrol. Alb. joined with butter, Sir Hans Sloane's ointment, are remedies by no means calculated to cure these cases. The supposed good effects of the last, which has made so much noise in the world, and has acquired such a high reputation, has not been owing to any specific properties in the ointment, but to the regular treatment with which it has been always accompanied, as bleeding, &c. However, upon the whole, if these applications do no great service, the use of them are attended with much less hurt than astringent lotions.

The application of poultices, if mild or emollient may do no harm, but any great advantage cannot be expected from their use.

The Pediluvia I consider as an useful remedy, but more particularly in summer, than in cold weather: the hour of rest is the most proper time for its use.

I must here remark, that what I have advanced in my observations, does not arise from any sudden prejudices, but from a just attention to practice in a great number of cases.

cases. I have formerly, in repeated instances, followed the common practice, and have observed the strictest rules; but the ill success attending it made me form in my mind a system, which I thought more rational, and which has succeeded in every instance. In the common methods, unless the Inflammation is very slight, the cure is seldom brought about in less than three weeks or a month, nay sometimes in obstinate cases in many months, which every practitioner may have observed. The patient all this time not only suffering the misery of the most painful disease, but likewise the application of many severe and disagreeable remedies; as blisters, issues, setons, scarifications, &c. The tediousness of the common methods, I believe, have often occasioned an opacity of the cornea, and sometimes total blindness; and I knew an instance, where, by the repeated application of an injudicious poultice, a suppuration of the eye was brought on, which had nearly proved fatal.

Quacks

Quacks and itinerant oculists have in general practised the cure of all the diseases of the eyes, and men of reputation have deserted this branch, as though it did not belong to the profession, or as if this organ was not worthy of their notice; this is an observation of Heister and others, who mention it with concern. Whether these disorders, being chiefly attended to by pretenders, or whether it was thought, that their treatment was brought to its utmost perfection; true it is, that there has been great neglect as to its improvement, which has made but very slow advances, and very far from those which have been made in other diseases. Authors and practitioners have followed one another in one continued run of practice; nay, some authors either are careless or even ignorant of the disease on which they write; Dr Shaw, who was so much respected for his physical writings, was totally ignorant of the cataract, and as a proof of what I advance, I shall take the following extract from his work.

“

“ A suffusion, is a thick foulness or ex-
 “ crecence of the tunica cornea, adnata,
 “ or aqueous humor, which when confirm-
 “ ed, makes the cataract. These disorders
 “ may be caused by contusion, foulness,
 “ &c. coming from without, and from
 “ within, by whatever increases or con-
 “ denses the coats and humors, or lodges
 “ corpuscles there, as viscid diet, &c.”

Where the author could get this defini-
 tion, or how he could be so totally igno-
 rant of a disease on which he wrote is
 astonishing. I do not know any modern
 author of reputation he could have taken it
 from, unless by mistaking the meaning.
 Had he consulted those authors, who had
 any knowledge of this disease, he would
 have found that the glaucoma, suffusio, or
 cataract, was an opacity of the crystalline
 humour, or lens; for Galen and all his fol-
 lowers were wrong in their definition of this
 disease, which has long been clearly proved.
 But that the cataract is either an excrescence
 of the cornea, adnata, or aqueous humour,
 &c.

&c. is absolutely false, as neither of these mentioned parts have any connection in constituting the disease itself.

I do not mention this error as a reflexion on the author, to indulge an ill-natured criticism, but only to shew how absolutely necessary it is for authors to have a thorough knowledge of the anatomy of the parts, and the disease on which they write, and not idly to follow the opinion of others. If this great practitioner had understood the anatomy of the part, which I presume he did not, he never could have been ignorant of so common a disease.

It must be observed in inflammations of the eyes, that the small vessels in the conjunctive membrane, or white of the eye appear red, and on examination through a glass it is surprising what a number of the most minute vessels are to be seen; when the inflammation is very violent, it seems as tho' it was composed of nothing but blood vessels, and this membrane is sometimes amazingly thickened, particularly in that species of inflammation,

inflammation, which was formerly known by the name of chemosis.

I shall not pretend to account for these appearances, but observe, that the cure of inflamed eyes cannot be said to be complete till this redness disappears, and that part of the conjunctive membrane which is diseased reassumes its original whiteness.

I shall now proceed to explain my new method of treatment, in which I shall avoid all useless theory.

The first remedy I use is bleeding, which I repeat as freely as in a pleurisy, where the inflammation continues obstinate and violent.

I most commonly bleed in the arm, and take particular care to make a large orifice, which I think of considerable consequence to be observed in performing this operation in these cases. I am strongly persuaded, that if this operation was performed in the jugular vein more frequently on children in the small pox and measles, unless in cases which entirely forbid bleeding, that many eyes would be saved, which by the neglect

neglect of bleeding are inevitably lost. In my own practice I always make use of it, both in the beginning of these diseases, and after the disorder has come to a crisis, especially if the inflammatory symptoms run high; and it has been attended with very great success.

Purges are the next remedy made use of, but in my practice I seldom order them, unless in robust constitutions, and patients who have lived freely. In my method of cure I attend chiefly to give such remedies which are imagined to attenuate, and pass into the minutest vessels; such as cooling saline preparations given in very large doses, and often repeated, joined with antimonials, mercurials, &c. It being impossible to direct the particular medicines in every case, as they must be altered and skilfully administered agreeably to the constitution of patients, and other particular circumstances, according to the rules of art.

This is determining the remedies to the disease itself, and will be attended with immediate success.

I have

I have before mentioned my opinion concerning the collyriums which are prescribed in these cases, and have condemned as useless all astringents, as the Sacch. Saturn. the Vitriol Alb. or those with the Lapis Calaminaris, Tutia, &c. But though I never use these, yet I apply to the inflamed eyes mucilaginous preparations properly diluted with water, which, if they do not effect a cure, by obtunding the saline acrimony greatly ease the patient and allay the irritation. However, there requires some skill in using such applications; if they be made too viscid, they would close the eye-lids, which would with difficulty be opened. The only rule which I observe is, to proportion the mucilage to the discharge from the eyes; if there should be a large discharge, then a greater quantity of the mucilage is proper; and *vice versa*. The mucilage should not be prepared from seeds, but from gums, of the most innocent kind, as Gum Arabic. This application should be dropped into the eye, and left for the motions of the eye to dispose of it equally on the surface of its

tender membrane, which it lubricates; this method in general will produce happy effects, and greatly ease the smarting which the discharge occasions; though were we even to suppose that no very essential good should be obtained by this means, the mildness of the application will at least prevent it from doing any harm.

I have lately observed surprising good effects from a Collyrium of my own invention, which, in composition is quite different from any that has ever been used. If, by a continuation of its success it answers my present expectations, I shall not be remiss in communicating it to the public. And I am in hopes that this same remedy will prove a valuable acquisition to surgery, in the better management of particular Ulcers, Fistulas, and even the Cancer.

The treatment of the strumous or venereal Ophthalmia, will depend entirely on the altering the whole constitution. In the strumous, the bark, antimonials, sea-water, Dr. Russel's vegetable æthiops, and mercurials, have been found successful. In the venereal,
the

the antivenereal remedies, can be only useful. I have seen a number of inflamed eyes of the venereal kind, and one distinguishing symptom is, that the transparent cornea is more affected in these cases than the inflammation arising from other causes, tho' in other respects the symptoms have been exactly the same as in the simple inflammation, and it requires some sagacity to distinguish one from the other, unless some other venereal symptoms accompany the complaint. I will mention two remarkable cases of this sort.

C A S E.

Mrs. R——, in 1767, had a violent inflammation of both eyes, which so affected the cornea, as entirely to deprive her of sight. I found the case had already been ineffectually treated as inflammatory, I therefore made trial of my own method of treating inflamed eyes, but not with the usual success; upon enquiry I learnt that this patient had formerly contracted the venereal infection

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tion from her husband, and I immediately concluded she had not been cured, upon which I ordered her mercurials, with the Decoct. Sarsa, which had an amazing effect. In about a fortnight she could see and distinguish objects, and by continuing the medicines she received a cure in about seven weeks.

C A S E.

In 1768 Mrs. S ——— had a violent inflammation of the eyes, with an opacity of the cornea and total loss of the sight of one eye. This case had been treated in the most regular manner as an inflammation, but without any success; upon close examination I perceived some eruptions on her breast and neck, which I was positive were venereal, but she and her husband both persisted in denying their having any such disease. She had a young child which she had put out to nurse, and which she had suffered to suck at her nipple, in endeavouring to amuse her from crying, after which the nipple

ple was sore and the eruption appeared, but not being suspicious of any bad consequence, she did not attend to it till I made my enquiries; upon examining the child it appeared covered all over with a venereal scurf, owing to her having sucked a nurse who was infected with the confirmed lues, which she had communicated to the infant by her milk, and the infant to the mother in the manner I have before mentioned. I began the cure of this case by a decoction of Sarsa, and a Solution of the Corros. Sub. which succeeded; the mother received her sight, and has since remained well; but after many fruitless attempts to cure the child, she died in a languishing condition.

To give a just idea of the peculiar advantage of my new method, I shall make a comparison between it and those which are in common practice, and leave it to the judgment of men of candour to determine its utility.

In the common practice many severe and cruel methods are made use of; and if these do not succeed, which is generally the case, the patients are kept in misery some-

times for a number of weeks, nay months, by a disease not only dangerous and alarming, but attended with the most exquisite pain. The application of the common remedies is so cruel, as to nearly equal in pain the disease itself. Let any unprejudiced person image to himself the uneasy sensations which attend perpetual blisters, setons, and issues: though I believe even these would not be complained of, if they were attended with success, and the patient could always get a cure by their means. But this is not the case, and I am of opinion from practical observation, that the tediousness of the common practice is often the cause of total blindness.

In my method I never apply any severe remedy whatever, and its success most commonly answers my expectation; the patient is immediately relieved of the violence of the symptoms, and the cure is effected in a few days; by which means dangers of the most alarming nature are avoided, as the Cataract, the opacity of the Cornea, and even the Gutta Serena; for it sometimes happens, that one or other of these diseases succeeds

succeeds a violent Ophthalmia, and that suddenly, therefore, the cure, in these cases, cannot be too speedily performed.

I am sensible how backward many practitioners in physic are in trying new methods in the cure of diseases, whatever room there may be for improvement; nay, how apt they are from fixed prejudices to condemn them without any trial at all. As what I have already advanced may not be sufficiently satisfactory, however justly I may have condemned the practice of others, or recommended my own, I will just mention a few cases by way of illustration. These are the best, and indeed the only conclusive argument in favour of any new mode of practice; and facts, when sufficiently attested, will ever remain uncontrovertible,

C A S E.

Nurse Savage, aged between fifty and sixty, who belonged a number of years to the Brownlow-street Lying-in Hospital, Drury-

lane, in attending the duties of her office caught a cold, which was immediately succeeded by a violent Inflammation of both eyes, she was treated in the common methods now in use. Leeches were repeatedly applied to the temples, purges were ordered, and a poultice was applied to the eyes, composed of white bread and milk, camphor, and sweet oil. One of the gentlemen ordered an astringent lotion, and I make no doubt, but that every method was tried according to the common rules of art by the gentlemen belonging to the Hospital, who are eminently distinguished for their abilities in their professions. However, all the assistance which this woman had, was not attended with success, and in about a month or more she totally lost her sight, and was rendered miserable from the exquisite pain which attended the Inflammation.

Being blind and incapable of doing her duty at the Hospital, she was discharged, and in the greatest distress imaginable was led

led to me. On examination, I found the whole Conjunctive Membrane in both eyes violently inflamed and thickened, with an opacity of the Cornea, which did not admit any rays of light. I immediately bled her, and ordered half a dram of the nitre to be taken every two hours, joined with the tincture of antimony and julep. è camphor, without any external application whatever, and these means were attended with amazing success, for in four days she so far recovered her sight, as to walk without any assistance to my house, and in four days after, she perfectly recovered the sight of her left eye; and the Inflammation was cured in both eyes; but there still remains a partial opacity of the transparent Cornea in the right eye, yet she can distinguish objects, and discern colours at this present time in the last-mentioned eye.

What is remarkable in this case is, that the eye, which is perfectly cured, had the poultice already mentioned only applied in the day time, whereas the other had it
day

day and night, which is some proof of what I have advanced on the impropriety of applying such external remedies to the eyes when in an inflamed state.

The woman has followed the business of nursing the sick ever since her cure, and is a night nurse at the Hospital at this present time.

C A S E.

Mrs. A——, Great Queen Street, Lincoln's-inn-fields, a Lady well known in the polite world, and respected as an artist, was afflicted with a most violent inflammation of one eye; it was that sort which authors have distinguished under the denomination of Chemosis, which is imagined to be the most dangerous. The whole conjunctive membrane was violently inflamed and thickened, the transparent cornea appeared sunk, and the sight of the eye was lost. That part of the conjunctive membrane which lines the lid likewise hung over, and made a disagreeable appearance. The remedy which I ordered in this case was the common saline mixture, joined with an
antimonial

antimonial tincture and nitre, which was taken in large doses and frequently repeated; I would have bled, but the Lady had some gouty complaints, and therefore I directed leeches to be applied to the temples. A gentleman, who met me to consult on this case, would fain have scarified the conjunctive membrane, but I rejected the proposal, as I have known it attended with dangerous consequences, as violent pains in the head, and even a delirium. The success attending my method in this case was surprising, for in four or five days we found the patient painting a fruit piece; all the inflammatory symptoms had disappeared, and the cure was confirmed.

C A S E.

Ann Paylen, aged 70, Eagle-court, Strand, had been afflicted nine months with an inflammation of the eyes; she had been bled, purged, and blistered without success, and had nearly lost her eye-sight; upon her application to me I bled her, and ordered her
a cooling

a cooling remedy as in the last case, with an addition of nitre, which was attended with success ; all the red appearance which had continued for months, with the most violent distracting pain in her head, and a discharge which had rendered her miserable from its excessive sharpness on the inflamed parts the whole time, entirely went off, and in seven days, by repeating the bleeding and medicine, the eyes reassumed their usual colour, and the woman declared she saw better than she had done for six or seven years ; this I imagine, was only ideal, and must have arisen from the agreeable impression made on her mind in being restored to her sight.

C A S E.

In the year 1766, Thomas Lyons, Newtoner's Lane, had a violent inflammation in both his eyes, and he being of a robust habit, I took from him twenty ounces of blood, at the first bleeding, the mucilaginous lotion was applied to his eyes, and I ordered him a calomel pill of three grains every night,

night, and a nitros mixture, with tinct. of antimon. in the day time. This method and repeated bleeding, in about six days effected a cure, and he has remained well ever since.

C A S E.

A youth related to Mr. Bulmer, Great St. Andrew-Street, Seven Dials, about four years ago, after the confluent small pox, had a most violent inflammation of the eyes, he had taken purges, and the other common remedies were made use of before I saw him, under the direction of the gentlemen at the Small Pox Hospital; on examination, I found that the conjunctive membrane was violently inflamed, and the cornea so affected, as not to admit the rays of light. In this situation his friends had very little prospect of his ever recovering his sight. I began the cure by bleeding freely, and giving the cooling medicines and the lotion as in the other cases, which succeeded. In about a fortnight the inflammation had entirely subsided, but there remained an ulcer on one
part

part of the transparent cornea, yet this was soon healed; a speck on the cornea remained some time afterward, but I gradually reduced that in the manner I shall hereafter mention. The boy at this time, has no obstruction in his sight.

I could have given, if it was necessary, a very great number of similar cases, which would have further corroborated what I have asserted, but as it would only prove a tedious repetition I have omitted them. To conclude, I have but one thing more to recommend to those practitioners who make trial of this new method, which is not to give the medicines, at those common distances of six or eight hours, but to repeat full doses every two or three hours in the day time, with plenty of diluents, for it is by this means that I ensure success.

O N

U L C E R S, S P E C K S,

A N D

O P A C I T Y O F T H E C O R N E A.

AS the small pox is the most common cause of ulcers, specks, and opacity of the cornea, I shall take a short view of the present treatment of the eyes in this disease, expose its defects, and lay down rules which I believe will be attended with greater success than those in use.

It is almost an universal practice, in the confluent small pox, to keep the eye-lids closed from the beginning of the disease, to its crisis, which is certainly the cause of blindness in a number of instances. Let any one examine the blind in our streets, he will

will find that though loss of vision sometimes proceeds from an opacity or suppuration of the eye from other causes, it is more generally owing to an incurable opacity in the transparent cornea, arising for the most part from the small pox, or rather I am persuaded from injudicious treatment of the eyes in this disease, particularly that which I have already mentioned.

I believe it will be allowed, that matter, or any acrimonious serum, when pent up for some time in any part, will insinuate itself, and by its eroding property do mischief; then what evils may we not naturally suppose it capable of, when enclosed and acting on such a tender organ as the eye, and its membranes.

It must be a natural conclusion from what I have already said, and from a parity of reasoning on the healing of ulcers in other parts, that the opacity of the cornea is occasioned by the means I have already mentioned. We are very sensible, that when ulcers are healed in other parts, that the parts which were lost are not filled up with

with the same uniform and perfect substance it was before the accident happened, and this is the case in the cornea. For in the incarnation and cicatrization of these ulcers, we may demonstrably prove this difference of substance more satisfactorily than in other parts, when we compare the space which the ulcer occupied, with the cornea of the other eye, if in a sound state.

It now remains for me to treat of the best practical method of preventing these accidents, and likewise their treatment, when this has either been neglected, or has not been attended with success.

In the treating inflamed eyes in the small pox, besides the general methods I have recommended, as bleeding in the jugular, &c. I would strongly recommend the application of leeches every day to the temples, according to the violence of the inflammation, (for the purple petechiæ, or any putrid symptoms forbid this practice;) but above all, frequently to raise the eyelids and give vent to the matter and

D

serum

serum which is continually collecting there, and drop into the eyes the mucilaginous preparation, which I have recommended, and to prevent the adhæſion of the eye-lashes, as in opening the lids it occasions pain ; I have frequently ordered the edge to be carefully touched with a pencil, with some Ol. Amygd. but great care must be taken not to admit any into the eye ; by these means I may venture to say, that the accidents which happen from the small pox will, in general, be effectually prevented.

If the eyes have been neglected in the small pox in the particulars I have mentioned, and there remains a violent inflammation, which is often the case ; I can only recommend the general methods before mentioned, and these will prove equally successful in the cure of those cases.

There sometimes remains, for a number of years, an inflammation of the eyes after the small pox, which frequently resists all the common methods of cure ; the inflammation is sometimes fixed only in that part of the conjunctive

junctive membrane, which lines the lids, and being considerably thickened, makes a very disagreeable red appearance; the membrane thus inflamed, projecting beyond the external part of the eye-lid. In other instances, the whole membrane is inflamed. These are cases which are imagined very difficult of cure, but I have had the success to cure a number with as much ease, and by the same means I have recommended in other cases. I shall here communicate a remarkable instance of this sort, which I have lately cured.

C A S E.

Eliz. Charlton, at Mrs. Charlton's, Green Grocer, Leather-lane, in September 1768, had the confluent small pox in the country, which terminated in a crisis on the 21st day, during the whole time her eyes were kept closed; after the crisis they were found very much inflamed, and she was put under the care of a Surgeon, who, I find, treated her in the common manner; she was

bled, purged, and repeatedly blistered in the neck, behind the ears, and on the legs, but these means were not attended with success, upon which she came to London, after various methods had been tried for one year in the country ; and about September 1769, she went under the care of an eminent oculist in this town, who ordered bleeding and other remedies, and gave her a lotion. In this manner she continued near two years under his care, without receiving any relief whatever ; and, as she informed me, he declared, that it would be a year or two more before she could obtain a cure. Her case was a violent inflammation in the whole conjunctive membrane, the external edge of that part which lines the lid, was considerably thickened, appeared of a florid red, and projecting outwards, made a very disagreeable appearance ; she could not bear the light, the transparent cornea appeared rather dim, and the whole was attended with very violent pains in the head and eyes. I undertook her
cure,

cure, and began by a plentiful bleeding, and ordered the common cooling remedy, as in the other cases, to be taken six times in the day, and repeated the bleeding; which method was attended with success. And this case, which had resisted many methods for three years, was positively cured in a few days, there not being at this present time the least appearance of inflammation.

ON
U L C E R S
OF THE
C O R N E A, &c.

AN ulcer of the transparent cornea, or tunica adnata of the eye, not unfrequently succeeds a violent Ophthalmia ; but more particularly happens in the inflammation which sometimes accompanies the confluent small pox. It is most commonly owing to an abscess happening in either of the fore-mentioned parts, which, when in a state of maturation bursting, immediately forms an ulcer, which will, in common, be

be known by the patient not being able to bear the light, and a pricking sensation like the points of needles is felt in the eyes. For it sometimes happens, that we cannot examine the state of the eye, without putting the patient to much pain, owing to the preternatural enlargement of the eye-lid. When the ulcer only happens in the tunica conjunctiva, it is seldom attended with any ill consequences, nor does it in this case ever impair the vision; the great danger is, when it is situated on the transparent cornea, for here it more or less always impedes vision, and in proportion to its size, so will it be proportionably dangerous.

The cure of the ulcer will depend on the proper administration of internal remedies, which must be ordered according to the circumstances of the case and habit of the patient. To some the Cort. Peruv. will be absolutely necessary, and to others, a cooling regimen must be prescribed; in short, the rules observed in the treatment
of

of other ulcers may be successfully practised here, which must be left to the skill and discretion of the practitioner.

The lotions of the astringent or drying kind, are absolutely as improper here as in the inflammation, though I am sensible that practitioners in general use them. The simple application of the mucilage, diluted with water, greatly relieves the patient, obtunds the acrimony of the tears, and entirely prevents those pricking sensations which are attended with such inexpressible pain.

ON THE
SPECKS AND OPACITY
OF THE
C O R N E A.

THERE are specks or spots on the cornea, and sometimes the opacity, formerly known by the names Albugo, Nebula, Leucoma, Nubecula. These are names for one and the same disease, and only characterise their shape, &c. As the using such names can only create confusion, and being of no service whatever in the cure, I hope I am right in omitting them. These Specks, &c. happen from various causes, but
more

more commonly succeed the cicatrization of the ulcers already mentioned, though I am persuaded, that this has not been sufficiently attended to. A prevailing opinion has been received, that pocky pustules are in general the cause of the speck or opacity observable after this disease, but I believe this never happens in the transparent cornea ; it is more probable, that pustules may form on the conjunctive membrane, owing to its being so vascular. This opinion of pustules on the cornea, must have arisen from the neglect of examining the eyes, which, as I have before observed, are constantly closed, from the beginning till after the crisis of the disease. Matter being pent up for such a length of time, is the true original cause of the ulcer, and, consequently, the specks or opacity of this coat.

To conceive clearly of this disease, we must consider the structure of the transparent cornea, it being composed of several Laminæ ; and in proportion as more or less of these Laminæ are affected, so in proportion will the case be curable or incurable.

If

If the cornea be diseased through all the Laminæ, and that happening immediately before the pupil, then the case is incurable; but if only a part before the pupil, or some of the external Laminæ be only affected, then may we suppose the case curable, by the application of proper eschorotick remedies.

I have seen cases where the external Laminæ have been quite transparent, and the internal opaque; in this case, no remedy whatever can prove of any service, as we cannot reach the seat of the disease.

To ascertain the true state of the disease, I always take a side view of the eye, particularly examining the convex part of the cornea; and whoever thus views it, and is previously acquainted with the anatomy of the part, will be sure to form a proper prognostic in these cases.

If the cure can, with propriety, be attempted, the common methods of treatment are to blow double refined sugar, alum, or vitriol. alb. finely powdered into
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the eye, which, I am opinion, is injudicious and cruel, although I am sensible they often succeed in curing these cases.

I must observe, that the speck or opacity, in the generality of cases, covers but a part of the transparent cornea of the eye; hence, the absurdity of applying an eschorotick to the surface of the whole eye, and its tender membranes, will appear evident; though was the whole transparent cornea opaque, such a practice must be equally injudicious. The effects of these applications are very sensibly felt on the whole conjunctive membrane, and it may be observed, puts the patient to very great and unnecessary torture, acting with equal power on the sound, as on the diseased part, though as the last-mentioned part is not diseased, consequently it cannot require any such corroding and severe application.

The method which I make use of, and would recommend, is to apply the corrosive remedy exactly, and only to the part affected, by dipping a fine hair pencil into the powder,

powder, or a weak solution of the Lap. Infernalis, which last is preferable, and this should be in so small a quantity, that the motions of the eye may not extend its effects further than on the part diseased; for if this is not observed, the patient will be subject to the same inconveniences and acute smarting, which attend the common methods. To obviate every difficulty in this treatment of the opacity, I have invented a little instrument which will absorb the corrosive application if necessary. This is made by a piece of fine sponge fixed in a quill; and I sometimes find it necessary to use the speculum.

It is by these means I effectually remove the opacity, if curable, with the greatest ease to the patient, for the opaque body itself appears to me to be insensible.

There are some specks on the cornea which rise and form a kind of pellicle, between the Laminæ of the cornea, sometimes containing matter, and in some cases not. In these cases an incision must carefully be made with a lancet, and at the same

same time as much as possible of the diseased part should be removed; the sooner this is performed the greater will be the success attending it. For I have known instances in these cases, where the disease has extended itself in a few days surprisngly, particularly where it has succeeded a violent inflammation.

After the incision is made, the edges of the ulcer which it forms, should be treated in the manner I have recommended in the opacity; as a strict observation of this, will, in general, prevent the cicatrix from being afterwards opaque and obstructing vision.

Zinn advises a solution of the corrosive sublimate in these cases, and some pare the cornea with a knife; but upon the whole, I believe, with no great success: the solution of the corrosive is a very torturing application, and I think rather dangerous; and as there are other remedies milder, which may be applied in these cases with equal success, such cruel methods ought to be excluded from practice.

The

The paring the transparent cornea with a knife is hazardous, on account of the rolling motions of the eye. To obviate which, a speculum may be used; yet I am far from approving of this method, for I have lately seen an instance where, by paring the cornea, and cutting by accident a piece out of this coat, there remains a fistulous ulcer from which the aqueous humour is continually ouzing through and irritating the eye; therefore, I am of opinion, that the method which I have already mentioned is preferable, as I would always prefer a mild though tedious cure, if equally safe, to a quick one, when attended with hazard and danger.

Upon the whole, I hope, that what I have here published will prove an incentive for others to make farther improvements in this branch, which has been too long neglected by men of science. A constant run of erroneous practice has been imposed on mankind by illiterate empirics and pretenders, to the great disgrace and dishonour of the profession.

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